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EXAMINER

TORRES, MARCOS L

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/516,926

Applicant(s)

BAUSSI ET AL.

Examiner

Marcos L. Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-14-2005</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 2 is objected to under 37 CFR 1.75(c) as being in improper form because a claim cannot depend on itself. For examination purposes claim 2 depend on claim 1.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The term "about" in claims 4-10, 39-42 is a relative term which renders the claim indefinite. The term " about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.
5. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 sets the electrical length about one fifth the wavelength of the carrier while claim 8 set it to about one sixth. Since claim 8 depends on claim 7 it is not clear the bounds of the claims.
6. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear the meaning of the limitation "dithers its

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predetermined delay period"; for examination purposes it will be understood as "randomize its predetermined delay period".

7. Claim 31 recites the limitation "any two of the first units" in the third line. There is insufficient antecedent basis for this limitation in the claim. Previous claims recite at least one first unit", not a plurality of first units.

8. Claim 30 recites the limitation "each first units" in the second line. There is insufficient antecedent basis for this limitation in the claim. Previous claims recite "at least one first unit", not a plurality of first units.

9. Claims 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims recite the limitation of "DC level" and the specification does not further explain this limitation. For examination purposes it will be equated to "received signal strength indicator (RSSI)".

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claim 1, 20-26 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Desch US006078260A.

As to claim 1, Desch discloses a direction finding system comprising: at least one first handheld unit comprising circuitry that transmits a radio beacon signal (see

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abstract; fig. 1, item 101); and at least one second handheld unit (see abstract; fig. 2, item 201) having a display screen (see fig. 2, item 202). and comprising direction finding (DF) circuitry that receives a radio beacon (RB) signal transmitted by a first unit of the at least one first unit and determines from the received radio beacon signal an azimuth angle for the location of the first unit (see col. 4, lines 6-10); wherein the controller generates a display on the display screen responsive to the azimuth angle that indicates a location of the first unit (see col. 5, lines 5-20).

As to claim 20, Desch discloses a direction finding system wherein the direction finding circuitry determines a range for the first unit of the at least one unit responsive to the received RB signal (see col. 4, lines 24-31).

As to claim 21, Desch discloses a direction finding system according to claim 20 wherein the direction finding circuitry determines a DC level of the RB signal (see col. 4, lines 6-11).

As to claim 22, Desch discloses a direction finding system according to claim 21 wherein the controller determines the range responsive to magnitude of the DC level (see col. 4, lines 6-11).

As to claim 23, Desch discloses a direction finding system wherein the controller generates the display responsive to the determined range (see col. 4, lines 44-49).

As to claim 24, Desch discloses a direction finding system wherein the at least one second unit comprises circuitry for transmitting signals to the at least one first unit and the at least one first unit comprises circuitry for receiving signals transmitted by the at least one second unit (see col. 4, lines 11-22).

As to claims 25, Desch discloses a direction finding system wherein a second unit of the at least one second unit transmits an interrogation signal responsive to which a first unit of the at least one first unit that receives the interrogation signal transmits an RB signal (see col. 4, lines 11-22).

As to claim 26, Desch discloses a direction finding system wherein subsequent to transmitting the interrogation signal the second unit transmits at least one additional interrogation signal (see col. 4, lines 11-22).

As to claim 39, Desch discloses a direction finding system wherein the RB signals comprise a carrier wave having a frequency in a range from about 800 MHz to about 900 MHz (see col. 3, lines 34-35).

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claim 43 is rejected under 35 U.S.C. 102(e) as being anticipated by Katsuno  
US007085577B1.

As to claim 43, Katsuno discloses a communication system comprising: a plurality of cellular phones each of which comprises a display screen (see fig. 9, item 226) a GPS receiver that determines spatial coordinates for the phone's position (see fig. 9, item 230) and a transceiver for transmitting telephony and non-telephony signals

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(see fig. 9, item 228); wherein the transceiver of a first phone of the plurality of phones is controllable to transmit an interrogation signal responsive to which the transceiver of a second phone of the plurality of phones that receives the interrogation signal transmits a signal comprising GPS coordinates of the second phone; and if the first phone receives the signal transmitted by the second phone, it displays a position icon responsive to the GPS coordinates on the first phone's screen that indicates a location of the second phone (see col. 23, lines 1-9).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 2-3, 9-11 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desch in view of Donath 4754281.

As to claim 2, Desch discloses everything as explained above (see claim 1) except for a direction finding system wherein the direction finding circuitry comprises Watson-Watts direction finding circuitry. In an analogous art, Donath discloses a direction finding system wherein the direction finding circuitry comprises Watson-Watts direction finding circuitry (see col. 1, lines 5-6). Thereby, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings to enhance the quality of the direction.

As to claim 3, Desch discloses a direction finding system wherein for receiving RB signals the at least one second unit comprises a first antenna and a second antenna electrically connected to the Watson-Watts direction circuitry (see col. 1, lines 6-13).

As to claims 9-10, Donath discloses a direction finding system wherein the two antennae are spaced apart by a distance less than about one fifth or one eighth of the carrier wavelength (see col. 3, lines 51-57).

As to claim 11, Donath discloses a direction finding system wherein the Watson-Watts circuitry determines the azimuth from a difference between amplitude or phase of the received RB signal at the antennae (see col. 2, lines 7-19).



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As to claims 40-42, Desch discloses a direction finding system wherein a second unit of the at least one second unit has an effective maximum range less than or equal to about 50, 100 or 200 meters for receiving an RB signal transmitted by a first unit that can be used to determine an azimuth for the first unit (see col. 4, lines 24-27). Also, one of the ordinary skill in the art at the time of invention will know that the working range of device is directly proportional to the transmitting power level and will adjust the transmitting power level in conformance with the FCC statutes.

18. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desch in view of Donath as applied to claim 3 above, and further in view of Jelloul US005237336A.

As to claims 4-6, Desch and Donath disclose everything as explained above (see claim 3) except for a direction finding system wherein a difference in signal attenuation between the electrical connections of the antennae to the Watson-Watts circuitry is less than about 0.3 dB. In an analogous art, Jelloul discloses a direction finding system wherein a difference in signal attenuation between the electrical connections of the antennae to the Watson-Watts circuitry is less than about 0.3 dB (see col. 5, lines 46-48). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings to enhance the quality of the reading.

As to claims 7-8, Jelloul discloses a direction finding system wherein the antenna have an electrical length less than about one fifth the wavelength of a carrier wave of the radio beacon signal (see col. 3, lines 43-45).

19. Claims 12-13, 15, 17 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desch in view of Donath as applied to claim 11 above, and further in view of Katsuno.

As to claims 12 and 47, Desch and Donath do not specifically disclose a direction finding system wherein the at least one first or second unit comprises circuitry and apparatus that provides conventional cell phone telephony. In an analogous art, Katsuno discloses a direction finding system wherein the at least one first or second unit comprises circuitry and apparatus that provides conventional cell phone telephony (see col. 1, lines 6-10). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings to give communication capabilities to mobile apparatus and increase user satisfaction.

As to claims 13 and 15, Katsuno discloses a direction finding system wherein the at least one first or second unit comprises a common antenna for transmitting RB signals and for cell phone telephony functions (see fig. 9).

As to claim 17, Desch, Donath and Katsuno disclose everything as explained above except for a direction finding system wherein at least one first unit and the at least one second unit comprise a filter that blocks electromagnetic energy at a frequency of the carrier wave from reaching the cell phone circuitry. However, OFFICIAL NOTICE IS TAKEN THAT the use of filter to minimize interference is a common and well-known technique. Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings to minimize interference.

20. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuno in view of Tachikawa US007039427B2.

As to claim 44, Katsuno discloses everything as disclosed above (see claim 43) except for a communication system wherein each phone comprises a compass that generates signals responsive to a heading of an operator of the phone and wherein the second phone displays responsive to the compass signals, and together with the position icon, a heading icon indicating the heading of the second phone's operator. In an analogous reference, Tachikawa discloses a communication system wherein each phone comprises a compass that generates signals responsive to a heading of an operator of the phone and wherein the second phone displays responsive to the compass signals, and together with the position icon, a heading icon indicating the heading of the second phone's operator (see fig. 4-9, col. 1, lines 9-15). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for easily finding another users.

As to claim 45-46, Tachikawa does not specifically disclose which compass use GPS or magnetic. However, it would have been obvious to one of the ordinary skill in the art at the time of invention that one of those compass must be chosen in order for the communication system to work.

21. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desch in view of Katsuno.

As to claim 18 and 19, Desch discloses everything as disclosed above except for a direction finding system wherein the at least one first or second unit comprises

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circuitry and apparatus that provides conventional cell phone telephony. In an analogous art, Katsuno discloses a direction finding system wherein the at least one first or second unit comprises circuitry and apparatus that provides conventional cell phone telephony (see col. 1, lines 6-10). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings to give communication capabilities to mobile apparatus and increase user satisfaction.

22. Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desch in view of Tachikawa.

As to claim 36, Desch discloses a direction finding system wherein the display indicating a position of a first unit. Desch does not specifically disclose using an icon representing the first unit displayed against a background of a radar screen and wherein a location of the icon on the radar screen corresponds to a location of the first unit relative to the orientation of the second unit. In an analogous art, Tachikawa discloses using an icon representing the first unit displayed against a background of a radar screen and wherein a location of the icon on the radar screen corresponds to a location of the first unit relative to the orientation of the second unit (see fig. 4-9). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings to make easy to find one or more units.

As to claim 37, Tachikawa discloses a direction finding system wherein a first unit of the at least one first unit is programmable so that RB signals that it transmits comprises data encoding at least one visual cue characteristic of the user of the first unit (see fig. 4-9).

As to claim 38, Tachikawa discloses a direction finding system wherein the controller of the at least one second unit displays on the screen, in association with an icon representing a first unit, a visual cue of the at least one visual cue encoded in an RB signal it receives from the first unit (see fig. 4-9).

As to claim 33, Tachikawa discloses a direction finding system wherein each first unit is programmable so that RB signals transmitted by the first unit comprises ID data specific to a user of the first unit (see fig. 4-9, col. 15, lines 4-7; col. 11, lines 28-36).

As to claim 34, Tachikawa discloses a direction finding system wherein each unit of the at least one second unit is controllable by its user to transmit a signal comprising ID data that it receives in an RB signal from a given first unit whose location is indicated in the display, which given first unit is selectable by the user from the display (see fig. 4-9, col. 15, lines 4-7; col. 11, lines 28-36).

As to claim 35, Tachikawa discloses a direction finding system according to claim 34 wherein the second unit is programmable with preference data specific to the second unit's user and wherein the location of a first unit is indicated on the screen only if ID data in the RB signal received from the first unit matches preference data with which it is programmed (see col. 11, lines 28-36).

23. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donath in view of Brodie US006301545B1.

As to claim 31, Donath disclose everything as explained above (see claim 30) except for a direction finding system wherein the predetermined delay period for each first unit is chosen from plurality of different delay periods so as to reduce a probability

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that any two of the first units that receive a same interrogation signal have a same delay period. In an analogous art, Brodie discloses wherein the predetermined delay period for each first unit is chosen from plurality of different delay periods so as to reduce a probability that any two of the first units that receive a same interrogation signal have a same delay period (see col. 5, lines 25-34). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for avoiding transmission collision between the transmitters.

As to claim 32, Brodie discloses a direction finding system wherein the transmitting circuitry of the first unit dithers its predetermined delay period (see col. 5, lines 25-34).

As to claim 30, Donath discloses a direction finding system wherein the transmitting circuitry of each first unit transmits its RB signal following a receipt of an interrogation signal (see col. 4, lines 15-23). Since the claim does not specify the value of the predetermined delay period, for examining purposes the delay period is zero.

As to claim 27, Brodie discloses a direction finding system wherein each of the at least one additional interrogation signal is transmitted following a delay period that begins after a last RB signal received by the second unit that is transmitted by the at least one first unit responsive to the preceding interrogation signal (see col. 5, lines 25-34).

As to claim 28, Brodie discloses a direction finding system wherein each interrogation signal transmitted by the second unit comprises ID data specific to a user of the second unit (see col. 5, lines 25-34).

As to claim 29, Brodie discloses a direction finding system wherein each of the at least one first unit is programmable with preference data specific to a user of the first unit and if it receives an interrogation signal transmitted by the second unit it transmits an RB signal responsive thereto only if the ID data in the transmitted interrogation signal matches preference data with which it is programmed (see col. 5, lines 25-34).

24. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desch in view of Donath and further in view of Katsuno as applied to claims 13 and 15 above, and further in view of Brodie.

As to claims 14 and 16, Desch, Donath and Katsuno disclose everything as explained above (see claims 13 and 15) except for a direction finding system wherein the at least one first unit comprises a switch controllable to selectably, electrically connect the common antenna to the radio beacon circuitry or the cell phone circuitry. In an analogous art, Brodie discloses a direction finding system wherein the at least one first unit comprises a switch controllable to selectably, electrically connect the common antenna to the radio beacon circuitry or the cell phone circuitry (see fig. 2, item 42).

### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcos L. Torres whose telephone number is 571-272-7926. The examiner can normally be reached on 8:00am-6:00 PM alt. Wednesday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-252-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marcos L Torres  
Examiner




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SUPERVISORY PATENT EXAMINER